

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re Application of: | : |
| Francois <i>et al.</i> | : |
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| Serial No.: 10/608,279 | : Examiner: Ngo, Lien M |
| | : |
| Filed: 06/27/2003 | : Group Art Unit: 3727 |
| | : |
| For: Molded Closure and Apparatus | : |
| For Making Same | : |

AMENDMENT D UNDER 37 CFR 111

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants hereby respond to the Office Action mailed January 31, 2006 in the subject application as follows:

Amendments to the Claims begin on page 2;

Remarks begin on page 10;

Replacement Drawings, Figures 2 and 6 are attached after page 10; and,

Annotated Drawings, Figures 2 and 6 are attached after the replacement drawings.

IN THE CLAIMS

1. (previously presented) A molded closure comprising:

a cylindrical side wall having a first inner wall on which an auxiliary thread is disposed, said auxiliary thread being inwardly directed to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

said side wall also having at least one principal thread being inwardly directed thereon for engaging a container neck finish;

said auxiliary thread being disposed at a first end of said side wall to inhibit engagement of said auxiliary thread and said container neck finish and said principal thread being disposed toward an opposed second end of said side wall;

said auxiliary thread and said primary thread extending from substantially equivalent radial locations of said cylindrical side wall;

said auxiliary thread having a first depth and said principal thread having a second depth, said second depth being at least about twice said first depth.

2. (original) The molded closure of claim 1, wherein said auxiliary thread is helical.

3. (original) The molded closure of claim 1, wherein said side wall includes at least one tier.

4. (canceled)

5. (original) The molded closure of claim 1, wherein said auxiliary thread includes a first pitch and said principal thread includes a second pitch, said first pitch being unequal to said second pitch.

6. (original) The molded closure of claim 1, wherein said auxiliary thread is incongruent with said principal thread.

7. (previously presented) A molded closure comprising:

a side wall having at least one cylindrical wall portion, said cylindrical wall portion having a first inner wall on which an auxiliary thread is disposed, said auxiliary thread being inwardly directed for engaging a mold core thread and enabling removal of said closure from said mold core following a short shot;

said side wall also having at least one principal thread, said principal thread being inwardly directed to engage a container neck finish;

said auxiliary thread being disposed at opposite ends of said first inner surface of said side wall to inhibit said auxiliary thread from engaging said container neck;

said auxiliary thread and said principal thread extending from equivalent radial locations of said first inner wall;

said auxiliary thread being incongruent to said principal thread;

said auxiliary thread having a first depth and said principal thread having a second depth, said first depth being less than about one-half said second depth.

8. (original) The molded closure of claim 7, wherein said auxiliary thread is helical.
9. (original) The molded closure of claim 7, wherein said side wall includes at least one tier.
10. (canceled)
11. (original) The molded closure of claim 7, wherein said auxiliary thread includes a first pitch and said principal thread includes a second pitch, said first pitch being unequal to said second pitch.
12. (previously presented) A molded closure comprising:

a cylindrical side wall having an auxiliary inwardly directed thread disposed thereon, said auxiliary inwardly directed thread being helical to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

said side wall also having at least one principal inwardly directed thread to engage a container neck finish; and,

said auxiliary thread spaced apart from said principal thread by a preselected distance;

said auxiliary inwardly directed thread having a first depth, said principal inwardly directed thread having a second depth, wherein said second depth is greater than said first depth by a factor of at least two to inhibit engagement of said auxiliary thread and said container and said auxiliary thread and said principal thread extending from equivalent radial locations of said cylindrical side wall.

13. (original) The molded closure of claim 12, wherein said side wall includes at least one tier.

14. (canceled)

15. (currently amended) The molded closure of claim 12 ~~14~~, wherein said first depth is less than one-half the length of said second depth.

16. (original) The molded closure of claim 12, wherein said auxiliary inwardly directed thread includes a first pitch and said principal inwardly directed thread includes a second pitch, said first pitch being unequal to said second pitch.

17. (previously presented) A molded closure comprising:

a cylindrical side wall having at least one cylindrical wall portion, said cylindrical wall portion having a first inner wall on which an auxiliary thread is disposed, said auxiliary thread being inwardly directed to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

said side wall also having at least one principal thread, said principal thread being inwardly directed for engaging a container neck finish;

said auxiliary thread being disposed toward a first end of said side wall to inhibit engagement of said auxiliary thread and said container neck finish and said principal thread being disposed toward a second end of said side wall;

said auxiliary thread and said primary thread extending from substantially equivalent radial locations of said cylindrical side wall;

said side wall having a first diameter intersecting a portion of said auxiliary thread and said side wall having a second diameter intersecting a portion of said principal thread, said first diameter being less than said second diameter;

said auxiliary thread having a first depth being less than a second depth of said principal thread by a factor of at least one-half.

18. (original) The molded closure of claim 17, wherein said auxiliary thread is helical.

19. (original) The molded closure of claim 17, wherein said side wall includes at least one tier.

20. (canceled)

21. (original) The molded closure of claim 17, wherein said auxiliary thread includes a first pitch and said principal thread includes a second pitch, said first pitch being unequal to said second pitch.

22. (currently amended) A molded closure, comprising:

a primary helical thread formed on a cylindrical side wall of said molded closure;

a separate auxiliary thread formed on said cylindrical side wall of said molded closure along an upper periphery;

said primary helical thread having a first thread depth, said auxiliary thread having a second thread depth, said first thread depth being at least about double said second thread depth[.];

said primary helical thread and said auxiliary thread extending from equivalent radial positions of said side wall.

23. (previously presented) A molded closure having a primary thread and an auxiliary thread on an inner side wall, comprising:

a molded closure having an inwardly directed auxiliary helical thread to enable removal of said closure from a mold core following a short shot and an inwardly directed primary helical thread, said auxiliary helical thread formed on a peripheral end of said molded closure, said auxiliary thread having a first thread depth, said primary thread having a second thread depth, said first thread depth less than said second thread depth by a factor of at least one-half to inhibit engagement of said auxiliary thread and a container neck;

said auxiliary thread and said primary thread extending from substantially equivalent radial locations of a sidewall of said closure;

wherein said auxiliary thread is a congruent helical thread and said primary thread is a congruent helical thread, said auxiliary thread incongruent with said primary thread.

24. (canceled)

25. (previously presented) A molded closure which is easily removable from a mold core during manufacturing malfunctions, comprising:

a top wall;

a cylindrical side wall having an inner surface depending from said top wall;

an auxiliary thread having a first thread depth and being adjacent said top wall to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

a primary thread having a second thread depth and being disposed at an end of said side wall opposite said auxiliary thread for engaging a container neck finish;

said second thread depth being at least about twice said first thread depth to inhibit engagement of said auxiliary thread and said container neck finish;

said auxiliary thread and said primary thread extending from equivalent radial locations of said cylindrical side wall.

26. (previously presented) A molded closure which is easily removable from a mold core during manufacturing malfunctions, comprising:

a top wall;

a substantially continuous cylindrical side wall having an inner surface depending from said top wall;

an auxiliary thread having a first thread depth and being adjacent said top wall to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

a primary thread having a second thread depth and being disposed at an end of said side wall opposite said auxiliary thread for engaging a container neck finish;

said second thread depth being at least about twice said first thread depth to inhibit engagement of said auxiliary thread and said container neck finish;

said auxiliary thread and said primary thread extending from equivalent radial locations of said cylindrical side wall.

27. (currently amended) A molded closure comprising:

a dispenser having an upper aperture for dispensing a fluid;

a cylindrical side wall having a first inner wall on which an auxiliary thread is disposed, said auxiliary thread being inwardly directed to engage a mold core thread and enable removal of said closure from said mold core after a short shot;

said side wall also having at least one principal thread being inwardly directed thereon for engaging a container neck finish;

said auxiliary thread being disposed at a first end of said side wall to inhibit engagement of said auxiliary thread and said container neck finish and said principal thread being disposed toward an opposed second end of said side wall;

wherein said side wall includes a first tier and a second tier, said first tier including said first inner wall of said side wall portion and said second tier including a second inner wall, said auxiliary thread being disposed on said first inner wall and said principal thread being disposed on said second inner wall;

said auxiliary thread having a first depth and said principal thread having a second depth, said second depth being at least about twice said first depth.

REMARKS

Reconsideration of above referenced application is respectfully requested. After entry of the instant office action response, Claims 1-3, 5-9, 11-13, 15-19, 21-23, 25-27 remain in the pending application.

Drawings

The Examiner has objected to the Drawings stating that the “auxiliary thread and the principal thread extending from equivalent radial locations of the sidewall and having different tiers or the side wall having different diameters must be shown or the features canceled from the claims. Contrary to the Examiner’s allegations, these elements are shown in the drawings. The principal and auxiliary threads extending from equivalent radial locations are shown clearly in Figures 1-4. As depicted therein, the sidewall has an equivalent radial dimension. Alternatively, the different tiers or side wall having different diameters are shown in Figures 5 and 6. As depicted therein, the sidewall is depicted as having different diameters defining various tiers from which the auxiliary and principal threads extend. For these reasons, new drawings are not needed. The Examiner is respectfully requested to withdraw this ground of objection.

Applicant has amended Figure 2 to properly depict the thread depth dimension d_1 and d_2 . It has come to the attention of the Applicants’ attorney that the drawing is improperly labeled and that the descriptions previously provided to the Examiner have not been understood by the Examiner. The application clearly refers to the depth as the distance between the point of attachment to the wall of the closure and its point of greatest displacement therefrom. P. 9, lines 13-15. Further, in Office Action Response B, Applicant’s attorney stated that the teachings of the cited prior art reference were not related to the depth, the distance radially inward from the closure sidewall. See page 11, lines 10-11. Therefore, the Applicants’ attorney believes that the Examiner has misunderstood this term due to the drawings without carefully reading the disclosure. Applicants’ attorney submits this drawing change does not include new matter. Such drawing change has also been made in Figure 6.

35 U.S.C. § 112, Rejection of Claims 14, 15, 17-19 and 21

The Examiner has rejected Claims 14, 15, 17-19 and 21 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicant's attorney reiterates to the Examiner that Claim 14 was canceled in the previous office action. This was mentioned in the remarks section and is noted in the above claim set.

As indicated in the drawing objection section, the principal and auxiliary threads can extend from radially equivalent side wall portions, as shown in Figures 1-4, and may be found beginning at page 8, line 19 through page 9, line 4. Further the description of the side walls having different tiers, as shown in Figures 5-6, may be found in the Specification beginning at page 12, line 17. The Examiner's attention is drawn to these locations and the Examiner is further requested to withdraw these grounds of rejection.

35 U.S.C. § 102(b), Rejection of Claims

The Examiner has rejected Claims 22 and 27 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,844,442 to Schmalz. Applicant's attorney has amended Claims 22 and 27 rendering this ground of rejection moot.

Applicants' Claim 22 now recites that the principal thread and the auxiliary thread extend from equivalent radial positions of the side wall. As previously described this is shown in the drawings and therefore not new matter. Regarding Claim 27, Applicants now claim that the closure is a dispensing closure having an aperture for dispensing a fluid. The Schmalz reference fails to teach or suggest such limitations and Applicants respectfully request this ground of rejection withdrawn.

The Examiner has rejected Claims 1, 3, 5-7, 9, 11, 22, 25 and 26 under 35 U.S.C. § 102(b) as being anticipated by Von Till. Applicants' attorney respectfully traverses this ground of rejection.

In order to anticipate a claim, an asserted reference must include each and every limitation of the pending claim. In this situation, the Examiner has admitted in the subsequent

§103 rejection, that the Von Till reference fails to comprise a principal thread and an auxiliary thread. Therefore the Examiner's rejection is non-sensical. Although the Examiner asserts that element 14 of the Von Till reference is a thread, the Examiner later admits that the element is not a thread. Element 14 is described as a rib or protrusion. There is no basis for this rejection and the Examiner is respectfully requested to withdraw this rejection.

With respect to the Examiner's statement on the functional clause of the independent claims, the Examiner has recited a general proposition. However, the Examiner is directed to *In re Swineheart* which states that there is nothing intrinsically wrong with functional language. Where the patent office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possessed the authority to require that applicant to prove the subject matter shown to be the prior art does not possess the characteristic relied on. Accordingly, Applicants attorney believes the Examiner may rely on the functional language for patentability where the prior art structure may not perform the recited function. Von Till fails to provide an auxiliary thread for removal of a closure from a mold *following a short shot* and which does not engage a container thread. Therefore Applicants assert that the Von Till reference fails to provide any teaching or suggestion regarding the use of an auxiliary thread to engage a mold core and remove the closure following a short shot. Specifically, due to the short height of the Von Till closure, short shots would generally not be likely and therefore the no auxiliary thread is taught for such use. As previously explained to the Examiner, review of the Von Till reference also indicates that the closure taught therein "should be as short as possible," as stated at page 2, Col. 3, lines 32-33. However, such construction teaches away from the design in the Applicant's instant invention. Such short construction does not typically encounter the problem of short shots addressed by Applicants' invention, and which is overcome by Applicants' claimed invention. This is the reason, that the functionality of the Applicant's invention is not found in the cited prior art. For these reasons, Applicants' attorney respectfully requests this ground of rejection withdrawn.

35 U.S.C. § 103(a), Rejection of Claims

The Examiner has rejected Claims 1, 3, 5-9, 11-13, 16, 22, 23, 25 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Von Till in view of Schmalz. Applicants' attorney respectfully traverses this ground of rejection.

The Examiner recites the use of Von Till for teaching a principal thread depth being at least twice the depth of an auxiliary thread. Next the Examiner admits that Von Till fails to teach the auxiliary thread. As previously described, element 14 of the Von Till reference is not an auxiliary thread. Instead element 14 is merely a rib or protuberance. Therefore, the Von Till reference cannot meet the limitation that the principal thread is twice the depth of the auxiliary thread. Further, although Schmalz teaches threads 2 and 7, these elements do not meet the limitations of the claim. Von Till fails to aid in this lack of teaching.

Finally, it is again stressed to the Examiner that Von Till teaches away from the instant invention. As previously indicated in the immediately preceding office action response and herein, the Von Till reference also indicates that the closure taught therein "should be as short as possible," as stated at page 2, Col. 3, lines 32-33. However, such construction teaches away from the design in the Applicant's instant invention. For these reasons, the Applicants' attorney respectfully requests this ground of rejection withdrawn.

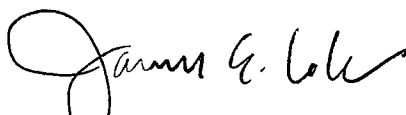
CONCLUSION

Applicants' attorney believes that the instant application is now in condition for allowance and therefore respectfully requests that the Examiner allow the pending claims. However, if the Examiner believes there are other unresolved issues in this case, Applicants' attorney of record would appreciate a call at (502) 584-1135 to discuss such remaining issues.

DATE: July 31, 2006

Respectfully submitted,

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